EXHIBIT D

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF RHODE ISLAND

KAREN PETRO, as Administratrix of the Estate of Mark Jackson	:	
v.	:	C.A. No. 2009-213S
TOWN OF WEST WARWICK, by and through its Finance Director Malcolm A. Moore; PATRICK J. KELLEY, individually and in his representative capacity; SEAN LUKOWICZ, individually and in his representative capacity; and SCOTT THORNTON, individually and in his representative capacity	:	

UNSWORN DECLARATION OF KEVIN BROWN, M.D.

I declare, under penalty of perjury, under the laws of the United States of America, that my attached report dated May 21, 2010 is true and correct.

Executed on January 25, 2011.

Kevin Brown, M.D.

Email: krbrownmd@verizon.net #914-760-8632

KEVIN BROWN, MD, MPH, FACEP

28 BYRAM HILL ROAD
ARMONK, NEW YORK 10504-1506

Stephen P. Sheehan, Esq.
Wistow and Barylick, Inc.
61 Weybosset St.
Providence, RI 02903

Re: Karen Petro v. Town of West Warwick et al., C.A. No. 09-213

EXPERT WITNESS REPORT

Dear Mr. Sheehan:

Here is my report in the above-referenced case.

I. QUALIFICATIONS, INCLUDING A LIST OF ALL PUBLICATIONS AUTHORED IN THE LAST TEN YEARS

Please refer to my attached *curriculum vitae*. I have experience working with first responders including police officers and firefighters. I have experience in cardiopulmonary resuscitation having personally treated hundreds of patients in my career in the pre-hospital phase as well as in the emergency department and in-hospital setting. I have expertise in evaluating and treating cardiac dysrhythmias having co-authored three books and several articles on the topic of abnormal cardiac rhythms.

I have also worked full-time as a paramedic for twelve years and maintain certification as an EMT-P (emergency medical technician-paramedic) in New York State. I am certified in pediatric advanced life support (PALS), advanced cardiac life support ACLS), basic life support (BLS) and I am an instructor in advanced trauma life support (ATLS). I have taught in paramedic courses every year since 1977, regularly conduct paramedic call reviews, and have been on regional EMS medical advisory committees for over ten years. I am currently credentialed as a medical control physician to provide telemetry direction to paramedics in several counties in New York State.

I am a member of the following medical professional organizations: American College of Emergency Physicians, American Academy of

Emergency Medicine, New York and Connecticut Chapters of American College of Emergency Physicians and the Emergency Medicine Resident's Association.

II. THE DATA OR OTHER INFORMATION CONSIDERED IN FORMING THE OPINIONS

I have considered the following material in forming my opinions:

1. Rhode Island State Police Narrative
2. DVD of West Warwick Police Department Rear Lot (6/27/08)
3. Recorded calls/Transmissions (6/27/08)
4. EMS Ambulance Run Report (6/27/08)
5. Records from R.I. Medical Examiner (including Autopsy Report)
6. Certificate of Death
7. Initial Psychiatric Evaluation, Leo Cok, M.D. (12/16/93)
8. Rhode Island Hospital Records (1994-1995)
9. Records from Social Security Administration: 12/1/04 Dr. LaFrance Evaluation; 10/15/04 Function Report
10. Miscellaneous prescription records (1993-1996)
11. General Order #320.07, AED (7/1/01)
12. General Order #300.04, Oleoresin Capsicum Spray (8/28/01)
13. General Order #97-24 Prisoner Policy (11/11/97)
14. General Order #320.08 Standard Operating Procedure for Arrests (8/28/01)
15. "Preparing for Sudden Death" Document
16. "Suicidal Subjects/Mentally Ill Persons" Document
17. Patrolman Patrick Kelley Deposition

18. Patrolman Sean Lukowicz Deposition

19. Sergeant Scott Thornton Deposition

20. Jeffrey Howe Deposition

21. Richard Kelly Deposition

22. Lt. Croft Deposition

23. Prv. Cahoon Deposition

24. Michael Simko Deposition

25. Robert C. Schlant et al., Eds. Hurst's The Heart 51 ("The Mechanisms, Predictors, and Prevention of Sudden Cardiac Death")(8th Ed. 1994) at 947

26. Gaita, F., et al., Short QT Syndrome: A Familial Cause of Sudden Death, Circulation 2003;108:965, 965. ("Ventricular fibrillation is the main mechanism involved in sudden cardiac death.")

27. Marx J, et al., Eds., Rosen's Emergency Medicine, Adult Resuscitation (6th Ed. 2006).

28. Fuster V, et al., Eds., Hurt's The Heart, Sudden Cardiac Death at 1025 (10th Ed. 2001).

29. De Bakker, J, Van Rijen, H, PhD, Continuous and Discontinuous Propagation in Heart Muscle: Role of Fibrosis in Discontinuous Conduction, http://www.medscape.com/viewarticle/533444_5.

30. Adabag AS, Maron BJ, Appelbaum E, et al., Occurrence and frequency of arrhythmias in hypertrophic cardiomyopathy in relation to delayed enhancement on cardiovascular magnetic resonance, J Am Coll Cardiol 2008;51:1369-1374.

31. Vaseghi M and Shivkumar K, The Role of the Autonomic Nervous System in Sudden Cardiac Death, Prog Cardiovasc Di. 2008; 50(6):404-419, 426.

32. Shaper AG, et al., Heart rate, ischaemic heart disease, and sudden cardiac death in middle-aged British men, Br Heart J 1993; 70-49-55.

33. Baracnchuk A., et al., The central nervous system and sudden cardiac death: What should we know? Card J 2009; 16:105-112, 109.

34. Rachel Lampert., M.D., Emotion and sudden cardiac death, Exeprt Rev. Cardiovasc. Ther. 7(7), 723-725 (2009).

35. Lathers CM, Schraeder PL, Stress and Sudden Death, Epilepsy & Behavior 9 (2006) 236-242.

36. 1 Valentin Fuster et al., The Heart, Sudden Cardiac Death Ch. 41 ("Sudden Cardiac Death") at 1051 (11th Ed. 2004).

37. Chugh S, et al., Sudden Cardiac Death With Apparently Normal Heart, Circulation 2000;102:649

38. Lecomte D., et al., Stressful events as a trigger of sudden death: a study of 43 medico-legal autopsy cases, Forensic Sci Int. 1996 May 17;79(1):1-10

39. Robert C. Schlant et al., Eds. Hurst's The Heart 51 ("The Mechanisms, Predictors, and Prevention of Sudden Cardiac Death")(8th Ed. 1994) at 949

40. Koponen H, et al., Schizophrenia and sudden cardiac death: a review, Nord J Psychiatry. 2008;62(5):342-5.

41. Adams et al., Eds., Critical Management principles, Rosen's Emergency Medicine (6th Ed. 2008) 84.

42. Ghuran AV and Camm AJ, Ischaemic heart disease presenting as arrhthmias, Brit Med Bull 2001; 59:193-210, 202.

43. R.O. Cummins, From concept to standard of care. Review of the clinical experience with automated external defibrillators, Ann Emerg Med. 1989; 18:1269-1275.

44. Larsen, MP Eisenberg MS, Cummins RO, Hallstrom AP, Predicting survival from out-of-hospital cardiac arrest: a graphic model, Ann Emerg Med. 1993; 22:1652-1658.

45. Cummins, Richard et al., Improving survival from sudden cardiac arrest: the "chain of survival" concept. A statement for health professionals from the Advanced Cardiac Life Support Subcommittee and the Emergency Cardiac Care Committee, American Heart Association 83:1832-1847 (1991).

46. Robert A. Swor, et al., Bystander CPR, ventricular fibrillation, and survival in witnessed, unmonitored out-of-hospital cardiac arrest, Ann Emerg Med. 1995; 25:780-785.

47. Richard O. Cummins, M.D., CPR and ventricular fibrillation: Lasts longer, ends better, Annals of Emergency Medicine 25:6 (June 1995).

48. Terence D. Valenzuela, et al., Outcomes of Rapid defibrillation by security officers after cardiac arrest in casinos, NEJM; 2006: 343: 1206-1209.

49. John P. Marenco, et al., Improving Survival from sudden cardiac arrest: The role of the automated external defibrillator, JAMA; 2001: 285:1193-1200.

III. A COMPLETE STATEMENT OF ALL OPINIONS THE EXPERT WILL EXPRESS AND THE BASIS AND REASONS FOR THEM

Introduction

Your office retained me beginning in February 2009 to consider the following issues: (a) What was the likely cause of Mark Jackson's death?; (b) Whether members of the West Warwick Police Department were grossly negligent and/or exhibited deliberate indifference in failing to provide timely medical care to Jackson?; and, (c) Whether the delay in administering medical care was a substantial factor in causing Jackson's death?

My opinions and the reasons for such opinions are as follows:

(a) The cause of death is sudden cardiac death, with complicating cardiac structural abnormalities, brought on by physical altercation with the police.

I reviewed the records from the Rhode Island Office of Medical Examiner, including the autopsy report. In my opinion, the cause of

death was sudden cardiac death, with complicating cardiac structural abnormalities, brought on by physical altercation with the police. I agree with the findings and conclusions reached in the autopsy report, including as follows:

> Opinion: It is my opinion that Mark Jackson, a 47-year-old white male, died as a result of ischemic heart disease following a physical altercation. The decedent was schizophrenic, and this contributed to his death. Postmortem toxicology is non-contributory.
>
> Cause of Death: Sudden death complicating ischemic heart disease following physical altercation with police in a schizophrenic person.

Sudden cardiac death ("SCD") refers to an unexpected death within a short time period from the onset of symptoms in a person without any prior condition that is fatal.

The circumstances of the physical altercation with the police itself support the autopsy report. That is, such an altercation as described by the Rhode Island State Police Narrative and by the officers themselves in their depositions, more probably than not caused an intense "fight or flight" sympathetic activation in Jackson's body. Sympathetic stimulation is mediated through a catecholamine surge. This response has been linked to causing ventricular arrhythmias and, if not promptly treated, SCD.

The medical examiner observed that Jackson (6'2", 259 lbs. at death) was obese and identified three cardiac structural abnormalities: (1) "75% of luminal narrowing of the midpoint of the anterior descending branch of the left coronary artery"; (2) cardiomegaly (520 grams); and, (3) "patchy myocardial fibrosis".

The vast majority of patients who have experienced SCD have cardiac structural abnormalities such as the three cardiac conditions identified by the medical examiner.

It has been recognized that those with pre-existing cardiac conditions face an increased his risk for SCD as their heart rate and stress levels increase during altercations such as the subject intense altercation with the police officers.

Additionally, Jackson's medical records indicate the he was a smoker (cigars) and led a rather sedentary lifestyle (watching television,

not working, reading, etc.) and these factors have been associated with an increased risk for SCD.

Jackson's mental health history also placed him at increased risk for SCD. Patients with schizophrenia are three times as likely to experience sudden death.

Jackson's pre-existing heart disease and mental health history, coupled with the altercation itself (which from all accounts was intense and certainly resulted in an increased heart rate and elevated blood pressure) more likely than not caused a stress on his abnormal heart leading to SCD, consistent with the autopsy report. In my opinion the SCD would not have occurred if Jackson had not been in the physical altercation with the police.

(b) Patrolmen Kelley and Lukowicz and Sergeant Thornton each exhibited gross negligence and deliberate indifference in failing to provide timely medical care to Jackson.

It is my opinion that Patrolmen Kelley and Lukowicz and Sergeant Thornton each exhibited gross negligence and deliberate indifference in failing to provide timely medical care to Jackson. It is also my opinion that Officers Kelley, Lukowicz and Sergeant Thornton knew, and that any reasonable police officer in their position would have known, that Mr. Jackson was in a position of extreme risk (i.e. risk of death) that obviously required immediate medical attention. Further, these officers knew and should have known that the immediate, early use of CPR and AED would greatly increase the chance of Jackson's survival. It is further my opinion that, despite this actual knowledge, these officers disregarded their knowledge and training and failed to provide timely medical care to Mr. Jackson.

The officers knew that it was critical to monitor and assess Jackson to ensure that he was in not in need of any medical treatment, and if Jackson was in need of such treatment, to provide it promptly and in accordance with their training:

Kelley, Lukowicz, and Thornton each testified in their deposition that they were trained and certified in first aid and CPR as of the subject incident. First aid instructors Richard Kelly and Jeff Howe have testified in their depositions that these officers received such training and certification pursuant to the American Heart Association's ("AHA") standards.

AHA provides instruction and certification for "first responders," meaning typically respond to calls for medical assistance as part of their usual professional responsibilities and who are first to render aid to a victim in advance of EMS (emergency medical services) paramedics and EMT's (emergency medical technicians). The training emphasizes a "chain of survival" to follow: early detection, early notification (for help), early basic life support (CPR), early defibrillation (AED), and early advanced life support (ALS—paramedic) care.

The AHA and literature instructs that a cardiac arrest victim's rate of survival decreases about 10% every minute that elapses before an AED is applied. The AHA also instructs that early use of CPR while waiting to apply an AED increases the duration that a cardiac arrest victim remains in a shockable ventricular fibrillation cardiac rhythm and significantly improves the chance of survival. The proper use of CPR includes mouth-to-mouth rescue breathing and chest compressions without interruption.

In addition, these officers were taught to follow a department policy (General Order #320.07) recognizing the importance of providing early medical treatment to cardiac arrest victims:

> The West Warwick Police Department recognizes the fact that when CPR and defibrillation are administered to a person who has been stricken with cardiac arrest during the early stages of attack, the survival rate of the victim greatly increases.

At the time of the incident, these officers had other relevant knowledge and training. For example, the officers knew that subjects, such as Jackson, who had been pepper-sprayed were at an elevated risk for sudden death and should be closely monitored for the need for emergency medical care and should not be kept in a prone position for an extended amount of time (Gen. Order #300.04, Oleoresin Capsicum (OC) Spray).

In addition, the officers were also required to follow General Order 97-24 entitled, "Prisoner Policy" which states in relevant part:

> "Combative Persons"
> . . . The arresting officer will call for additional personnel to assist in bringing the individual into the building. . . Once in the building, the OIC will monitor and/or assist the arresting officer with the arrestee. . .
> Persons of Diminished Mental Capacity or Persons Highly Intoxicated

. . . Upon arrival at headquarters, the OIC will assess the person's condition in conjunction with the arresting officer. . .

The officers were aware that a subject such as Jackson who exhibited bizarre behaviors and physical symptoms such as profuse sweating and extraordinary strength were at increased risk for a death occurring while in police custody (See e.g., "Preparing for Sudden Death" document). The officers also knew to closely observe mentally ill subjects and to be particularly concerned such subjects' physical well-being (See, e.g., "Suicidal Subjects/Mentally Ill Subjects" document).

Once an arrest was made, Kelley knew that as the arresting officer, he had a responsibility "to ensure that arrestees do not injure themselves." (Gen. Order #320.08 SOP for Arrests at 8).

The officers' actual interaction with Jackson fell far short of their obligations:

Kelley and Lukowicz were the officers who initially approached and fought with Jackson. They were present throughout the altercation. Kelley was the arresting officer and Lukowicz transported Jackson from the scene to the station.

Lukowicz testified in his deposition that he transported Jackson from the scene to the police station and that, while doing so, Jackson was making audible noises for a short period of time (perhaps 15-20 seconds) during the transport. He then became silent. The distance from the scene to the police station is approximately 0.9 miles and, at most, it may have taken 1 to 2 minutes to transport Jackson to the police station.

Lukowicz agreed in his deposition that he is trained to know that any prisoner he transports may have a medical condition and that he has to be alert to signs and symptoms. Lukowicz agreed that the fact that Jackson was obese and had been pepper sprayed increased the risk of sudden cardiac arrest. *Despite knowing that his prisoner had become completely silent and had not moved, Lukowicz allegedly did not examine or even look at his prisoner during transport and did not tell anyone of these facts or otherwise promptly act.*

Kelley was the arresting officer and Thornton the OIC (officer in charge). Upon arrival at the rear lot of the police station, Kelley testified in his deposition as follows: that he observed Jackson in the rear of Lukowicz's cruiser just lying there, not making any noise, and not moving - - but Kelley did not tell anyone. *Kelley did nothing to determine*

Jackson's medical condition even though he knew that if Jackson was unconscious, he would require emergency medical attention.

Thornton testified in his deposition that: he was the OIC at the time of the incident; from the radio transmissions, he was aware of the altercation before the officers arrived with Jackson. He also heard Kelley's radio transmission describing Jackson as an emotionally disturbed person. Thornton met Lukowicz and Kelley upon their arrival at the station's rear lot and became aware then that Jackson had been in a fight and pepper-sprayed. Kelley told Thornton that Jackson was a large man, was combative, and that the officers should first secure their firearms.

Thornton also stated in his deposition that he did not assess Jackson upon Jackson's arrival at the station even though he knew the above information and that: (1) pepper spray could result in positional asphyxia; and (2) a violent struggle with police could increase the chance for in custody death. *Incredibly, Thornton claimed to have forgotten General Order 97-24 and admitted he would have assessed Jackson immediately if he had recalled the General Order.* Rather, Thornton saw Jackson for the first time when the other officers pulled Jackson from the cruiser and never attempted to personally assess Jackson's condition.

The surveillance camera in the rear station lot recorded Jackson's arrival at the station in Lukowicz's cruiser and the ensuing events.

The officers did not open the door to the cruiser containing Jackson until more than 1 minute after arrival. The testimony of the police officers who checked him is that he was not breathing.

He was not taken out of the cruiser until more than 2 minutes after arrival. The first call for rescue did not occur until at least 2:25 after arrival (23:12:54).

The fire department and police station are located in the same building complex. The above-referenced delays were further compounded by these officers failing to initially communicate the emergency at hand. That is, Fire Dispatcher Michael Simko testified in his deposition that the initial call for rescue from the police station was for an intoxicated male and that it was only during a follow-up police call that he received word to expedite the rescue due to an unresponsive male. This caused some further delay as rescue personnel Croft and Cahoon testified that they had to double back to obtain an AED.

CPR, consisting solely of chest compressions, did not begin until 4:21 after arrival (23:14:50). The officers never performed rescue breathing or artificial ventilations, which is part of the required CPR process. After a 7 second delay, one of the rescue personnel resumed chest compressions at (23:15:01) that that were intermittently continued until the AED was applied.

This resulted in the AED not being applied on Jackson until 5:28 after arrival (23:15:57). By that time, the AED would not allow a shock. En route to the hospital, the ambulance run report indicates Jackson's rhythm was first "Asystole" and then "Vent. Fib," followed by "Pt. went back to asystole." Jackson was not revived and was pronounced dead at 11:44 pm at Kent Hospital.

I understand that the terms "gross negligence" and "deliberate indifference" are legal terms. "Gross negligence" generally means: (1) omissions/acts that create an extreme degree of risk in harming another; and, (2) the actors (here, WWPD patrolmen) were actually aware of this risk and chose to proceed in conscious indifference to the safety of another (Jackson). Similarly, "deliberate indifference" occurs where the actor knew of and consciously disregarded a substantial risk of harm to another.

(c) The delay in administering CPR and AED was a substantial factor in causing Jackson's death.

Due to the short distance involved from the scene to the station 0.9 miles), at most, Jackson probably stopped breathing within 1 minute of arrival at the station. Approximately 4 ½ minutes elapsed from the time Mr. Jackson arrived at the station until Patrolman Kelley started chest compressions, after not finding a pulse. CPR lasted only a few seconds without mouth-to-mouth being performed. About 1 minute further elapsed until the start of the AED.

It is my opinion that had Kelley, Lukowicz, and Thornton acted in conformity with their knowledge and training (as discussed above), then CPR could and should have been started immediately at or near the time of Jackson's arrival at the station (23:10:29), or about 4:20 sooner than happened here. Under such a scenario, at a minimum, the AED would have been started by about 23:12:20, or about 3:30 earlier than happened here. It is my opinion that under such a scenario, Jackson more probably than not would have recovered. The majority of sudden cardiac deaths are precipitated by an electrical disturbance in the heart's cardiac rhythm known as ventricular defibrillation ("VF"). Also, the existence of *myocardial fibrosis* in the heart muscle (as here noted in the medical examiner's notes) has been known to cause another electrical

disturbance known as ventricular tachyarrhythmias ("VT"). Based on the above, I believe that Jackson's sudden cardiac death was precipitated by some amount of time in VF.

Both VF and VT are treated with early CPR and defibrillation to shock the heart (using an AED). If an AED shock is delivered within 4 minutes of cardiac arrest, cardiac arrest victims' rate of survival is greater than 50%, but decreases about 10% every minute that elapses before an AED is applied. Additionally, the AED success rate is significantly higher when early (meaning within four minutes of cardiac arrest) bystander CPR is done than when it is not. CPR includes mouth-to-mouth resuscitation coupled with chest compressions and prevention of CPR interruption. Early CPR helps preserve the heart's electrical arrhythmia in, for example, VF. Untreated, VF and VT deteriorates into a total lack of cardiac activity termed *asystole* and death within minutes. By the time the rescue personnel attempted the AED here, Jackson was asystole. He briefly registered a VF rhythm en route to the hospital in the Fire Rescue ambulance. Based on the above, I believe that had CPR and AED been started earlier, Jackson more probably than not would have recovered.

IV. EXHIBITS THAT WILL BE USED TO SUMMARIZE OR SUPPORT THE OPINIONS

I may use any of the documents identified herein as having been considered in forming my opinion. I may also use a chart depicting a timeline of events, or other visual aids to explain my testimony to the jury.

V. A LIST OF ALL OTHER CASES IN WHICH YOU HAVE TESTIFIED IN THE LAST FOUR YEARS AT TRIAL OR DEPOSITION AS AN EXPERT

Please see attached listing.

VI. A STATEMENT OF THE COMPENSATION TO BE PAID FOR THE STUDY AND TESTIMONY IN THE CASE

Please see attached fee schedule.

Sincerely,

Kevin R Brown MD 5/21/2010